

CLAIMS

Having thus described the present invention, what is claimed as new and desired to be secured by Letters Patent is as follows:

1 1. A system for displaying a graphic image of interest based on compressed graphic
2 image data that include compressed data for the graphic image of interest, said system
3 including:

4 a memory;

5 means for storing the compressed graphic image data in the memory;

6 means for selectively decompressing a portion of said compressed graphic image
7 data as stored in the memory, said portion including data corresponding to the graphic
8 image of interest; and

9 display means for displaying the graphic image of interest based on the portion of
10 the compressed graphic image data as decompressed.

1 2. A system for displaying a graphic image of interest as in Claim 1, wherein said
2 means for storing the compressed graphic image data in the memory further includes
3 means for storing the compressed graphic image data in a linked list in the memory, said
4 linked list including a plurality of nodes.

1 3. A system for displaying a graphic image of interest as in Claim 2, wherein said

2 means for storing the compressed graphic image data in the linked list in the memory
3 further includes means for storing the compressed graphic image data in a node in the
4 linked list.

1 4. A system for displaying a graphic image of interest as in Claim 3, said system
2 further including means for flagging, as unused, nodes in the linked list that do not include
3 compressed graphic image data for the graphic image of interest.

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1 5. A system for displaying a graphic image of interest as in Claim 4, wherein said
2 means for storing the compressed graphic image data in a node in the linked list further
3 includes
4 means for determining if any nodes in the linked list are flagged as unused, and
5 means for replacing compressed graphic image data in a node flagged as unused,
6 if any in the linked list, with the compressed graphic image data that include compressed
7 data for the graphic image of interest.

1 6. A system for displaying a graphic image of interest as in Claim 5, wherein said
2 means for storing the compressed graphic image data in a node in the linked list further
3 includes means for adding to the linked list a node for storing the compressed graphic
4 image data if no nodes in the linked list are flagged as unused.

1 7. A system for displaying a graphic image of interest as in Claim 6, wherein said
2 means for selectively decompressing the portion of the compressed graphic image data
3 as stored in the memory further includes means for decompressing only the compressed
4 data corresponding to the graphic image of interest.

1 8. A system for displaying a graphic image of interest as in Claim 7, wherein said
2 display means includes means for generating a graphic image based on the portion of the
3 compressed graphic image data as decompressed.

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9. A method for displaying a requested graphic image from data included in a
compressed graphic image data file, said method including steps of:

loading the file into a memory;

decompressing a portion of the file as loaded into the memory, said portion including
data for the requested graphic image;

sending the data for the requested graphic image from the portion of the file as
decompressed to a frame buffer; and

generating the requested graphic image on a display device based on the data sent
to the frame buffer.

1 10. A method for displaying a requested graphic image from data included in a
2 compressed graphic image data file as in Claim 9, wherein the step of loading the file into

3 a memory includes the step of loading the file into a node in a linked list in the memory,
4 said linked list including a plurality of nodes.

1 11. A method for displaying a requested graphic image from data included in a
2 compressed graphic image data file as in Claim 10, said method further including the step
3 of flagging, as unused, one or more nodes that do not include the file.

1 12. A method for displaying a requested graphic image from data included in a
2 compressed graphic image data file as in Claim 11, wherein the step of loading the file into
3 a node in a linked list in the memory further includes the steps of:

4 determining if any nodes in the linked list are flagged as unused, and
5 loading the file into a node flagged as unused, if any in the linked list.

1 13. A method for displaying a requested graphic image from data included in a
2 compressed graphic image data file as in Claim 12, wherein the step of loading the file into
3 a node in a linked list in the memory further includes the step of adding to the linked list a
4 node for storing the file if no nodes in the linked list are flagged as unused.

1 14. A method for displaying geographic images from compressed geographic image
2 data files stored on a storage device, said compressed geographic image data files
3 including a file that includes compressed data for a first area of interest, said method

including the steps of:

receiving a request for the first area of interest;

loading the file that includes compressed data for the first area of interest from the

storage device into memory;

decompressing a portion of the file as loaded into memory, said portion including

data corresponding to the first area of interest;

sending the data for the portion of the file as decompressed to a frame buffer; and

generating a geographic image for the first area of interest on a display device

based on the data in the frame buffer.

15. A method for displaying geographic images as in Claim 14, wherein the step of loading the file that includes compressed data for the first area of interest from the storage device into memory includes the step of loading the file into a node in a linked list, said linked list including a plurality of nodes.

16. A method for displaying geographic images as in Claim 15, said method further comprising the step of flagging, as unused, nodes in the linked list that do not include compressed data for the first area of interest.

17. A method for displaying geographic images as in Claim 16, wherein the step of loading the file into a node in a linked list includes the steps of:

3 determining if any nodes in the linked list are flagged as unused, and
4 loading the file into a node flagged as unused, if any in the linked list.

18. A method for displaying geographic images as in Claim 17, wherein the step of
loading the file into a node in a linked list includes the step of adding to the linked list a
node for storing the file if no nodes in the linked list are flagged as unused.